

lay the foundation for the new center, named the Montefiore Medical Center–Shanghai Institute for Pediatric Research Collaborating Center for Prevention of Childhood Lead Poisoning.

Xiaoming Shen, professor and director of the new center, led the symposium. Shen had helped to define the dimensions of the lead threat to Chinese children in a series of studies and surveys begun in the late 1980s by the Division of Lead Poisoning Prevention of the Shanghai Institute for Pediatric Research, under institute director Sheng-mei Wu, who coauthored some of the studies.

Shen had done postdoctoral training in pediatric lead research with John F. Rosen, director of the Division of Environmental Sciences at Montefiore Medical Center and Albert Einstein Medical College in New York City. Rosen is a long-time NIEHS grantee and a key figure in bringing childhood lead poisoning concerns to the attention of the Chinese medical and public health community.

Rosen, developmental psychologist David Bellinger of Harvard University and Children's Hospital in Boston, toxicologist Paul Mushak of PB Associates in Durham, North Carolina, and Kenneth Balbi, a visiting professor at Albert Einstein Medical College and director of training at PROTECT Franchising, Inc., and neurologist Yoram Finkelstein of Shaare Zedek Medical Center in Jerusalem were the official foreign delegation at the dedication and symposium. The group gave lectures covering low exposure health effects, exposure monitoring and modeling, environmental measurements, neurobehavioral effects, and toxic mechanisms.

Examination of 17 studies from different parts of China indicates that the prevalence of lead poisoning for children living in industrial and heavy traffic areas ranges from 64.9% to 99.5%, Shen said. As many as 50% of China's children living outside of such areas have lead poisoning (indicated by greater than 10 micrograms of lead per deciliter of blood).

Significant sources of lead for China's children include industrial emissions (often close to housing and schools), leaded gasoline, lead-contaminated toys and stationery, secondary occupational exposure that occurs when parents wear lead-contaminated clothing home from work, burning of coal for home heat and cooking, contaminated food, and some traditional medicines, according to Shen. China's rapid development and traffic growth have increased the potential for lead emissions, as has the growth of cottage industries that use lead.

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The Inside Story

In July 1976, a faulty cooling tower allowed the pathogenic bacteria, *Legionella*, to be dispersed through the air conditioning system in a Philadelphia hotel, causing 182 of the guests there to become ill. Before the cause of the sickness had been discovered, 29 people had died. This is just one example of how the indoor human environment, which is designed to protect us from the hazards outside, can itself become deadly. In many parts of the world, office buildings house thousands of workers daily and an increasing number of people spend the majority of their time indoors. In addition to being potentially harmful to human health, the world's buildings can be extremely taxing on the earth's environment. Many heating, ventilation, and air conditioning systems are inefficient and, together with artificial lighting, constitute an enormous energy demand.

At Lawrence Berkeley National Laboratory's Center for Building Science (CBS), scientists face the challenge of

improving the ventilation and lighting systems of indoor environments while decreasing the amount of energy required to run them. The three separate research groups that comprise the center work in coordination with each other to develop energy-efficient technologies and analytical techniques for investigating indoor environments. The Building Technologies Program, the Energy Analysis Program, and the Indoor Environment Program each has its own home page on the World Wide Web, all of which can be accessed from the CBS home page located at <http://eande.lbl.gov/CBS/CBS.html>.

The Building Technologies Program conducts research involving indoor lighting systems and develops software for evaluating them. Links to the research groups located on this home page connect users to information on a number of public domain software packages for building designers, including SPARK, DOE-2, and Power DOE (programs that estimate the energy cost for a given building design) and WINDOW+5 and THERM (programs for evaluating the thermal and optical properties of windows).

The Energy Analysis Program examines worldwide energy use in a search for innovative and efficient end-use strategies. This research extends beyond building fixtures and appliances to the study of the urban environment. The Heat Island Project link, accessible through the Building Energy Analysis Group link on this home page, connects users to an informative reference on smog, evapotranspiration, and other environmental phenomena linked to urban heat islands. The results of important studies conducted by the Energy Analysis Program are also accessible from this home page, including a report that summarizes world commercial and industrial energy use, which can be downloaded by selecting the Industrial Energy Research link. Also included is a report on market characteristics for energy-efficient products found under the U.S. Energy End-Use Forecasting link. *Home Energy*, a journal of energy-efficient technology, is also located under the Building Energy Analysis link. The full text of articles from 1994 to the present can be accessed by a subject index or with a search engine linked to the magazine's home page.

The Indoor Environment Program studies indoor air pollutants including radon, volatile organic compounds, and combustion products, and analyzes their effects on human health. The site includes a list of recent publications that can be searched by following the Program Publications link. The results of the most recent research can also be accessed from the program's home page by following the Recent Research Highlights link. A complete index of current research taking place within the Indoor Environment Program is also available, including contacts' names.

The CBS home page also provides links to other sources of information on designing and living in healthy buildings. The Home Energy Saver link is the entrance to an expansive site that lets users analyze their homes for energy efficiency and provides information on how to save money on power bills. *The Center for Building Science News* is also linked to the CBS home page, with the full text of articles presented with graphics for issues from 1994 to present. The Energy Crossroads link connects users with an abundance of links to related sites.



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